

AMENDMENT TO THE CLAIMS

1. (currently amended) A community network system with broadband integrated services, comprising: which is composed of satellite digital television receiver servers, community video servers, video conference servers, network accounting servers, network management servers, Gigabit Ethernet Switches, Fast Ethernet switches, home gateways, digital television sets, analogue television sets, computers, IP telephones, wireless gateways, wireless IP mobile phones and PCs with a wireless interface, and which is characterized in that

the backbone Gigabit Ethernet Switch of the system, which is connected to other Gigabit Ethernet Switches a metropolitan area network via a 1000 Mbps port, and is connected to the satellite digital television receiver server, the video server, the video conference server, the network accounting server, and the network management server via a 1000 Mbps port or a 100 Mbps port;

the a plurality of Gigabit Ethernet Switches which are connected to the backbone Gigabit Ethernet Switch via a 1000 Mbps port and to a plurality of Fast Ethernet switches having 10/100Mbps compatible ports via a 100 Mbps port; the Fast Ethernet switches are connected to a plurality of home gateways and wireless gateways via 10/100Mbps compatible ports;

the a plurality of home gateways which are connected to the 10/100 Mbps compatible port of the Fast Ethernet Switches, and to the digital television, the analogue television, and the computer;

an the IP telephone which is connected between the Fast Ethernet switch and the home gateway or between the home gateway and the computer;

the a plurality of wireless gateways which are connected to the 10/100 Mbps compatible port of the Fast Ethernet Switches, and to the wireless IP mobile phone and the PC with a wireless interface via a radio link;

wherein the video server is connected to a video storage; the satellite digital television receiver server is connected to an outdoor antenna for receiving satellite data signals; the backbone Gigabit Ethernet Switch is also connected with a metropolitan area network via a 1000-Mbps port; and

a software system comprising:

an embedded operation system on the Gigabit Ethernet Switch, the Fast Ethernet switch and the home gateway, which is an embedded system formed by customizing the system kernel on the basis of a Linux system;

an operation system on the satellite digital television receiver server, the video server, the television conference server and the network management server, which is a Linux operation system or a Windows[®] system provided by Microsoft Corporation;

modules of multicasting software which are distributed on the satellite digital television receiver server, the video server, the television conference server, the Gigabit Ethernet Switch, the Fast Ethernet switch and the home gateway, and they cooperate with each other, support IGMP protocol, and achieve a control to the multicast media streams;

modules of accounting software which are distributed on the home gateway, the video server and the network accounting server, wherein the home gateway provides types of service, time of service and an amount of traffic used by the user;

modules of network management software which are distributed in the network management server and all the network devices, and detect and analyze a configuration status, a running status and a failure status about devices, wherein the accounting server generates a bill according to an accounting strategy and the statistic data of the user;

application software for implementing a digital television reception and forwarding, a video on demand system, a computer network service, an IP telephone service.

2. (currently amended) The system according to Claim 1, wherein

the satellite digital television receiver server is an industrial PC with digital television receiver card which is connected to an outdoor antenna;

the video server ~~may be~~ comprises one or more PC servers with disk array;

the video conference server is composed of a PC, a video capture card, a camera, and a microphone;

a PC functions as the network management server;

a PC functions as the network accounting server;

~~according to the configuration, the Gigabit Ethernet Switch can~~ is adapted to provide 1 to 6 1000Mbps ports or 8 to 48 100 Mbps ports;

one 1000Mbps interface module is exchangeable with eight 100Mbps interface modules;

the Fast Ethernet switch is adapted to provides 16 to 32 10/100Mbps compatible ports;

the home gateway is adapted to provides two or more 10Mbps or 10/100Mbps ports, in which one port is connected to one Fast Ethernet switch, and the other ports are connected to the IP telephone, the home computer or other devices;

a 15D type VGA interface, an S-Video interface, a composite video interface, a right sound channel interface and a left sound channel interface are ~~used~~ adapted to send audio/video signals to television sets and audio devices;

an infrared link is between a remote control unit and a remote controller; the wireless gateway is connected to a plurality of mobile phones or mobile PCs wirelessly, and is connected to the Fast Ethernet switch or the Gigabit Ethernet Switch through one 10Mbps or 10/100Mbps port.

3. (canceled)

4. (original) The system according to Claim 1, wherein the system uses an asymmetric VLAN technique to achieve the separation of user information, and uses IP addresses and MAC addresses of devices in the home gateway as well as the VLAN numbers allocated in the system to validate the users' identities.

5. (original) The system according to Claim 1, wherein there is no mosaic appearance in the digital television sets within 2 hours in average; the average duration of the mosaic appearance is no more than 0.5 second; the television channel switchover response is within 0.5 second, and the channel switchover is completed within 3 seconds; the VoD response is within 0.5 second, and the successful play begins within 3 seconds.

6. (original) The system according to Claim 1, wherein the speed phase locking of the application layer is processed on the home gateway.